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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Alex Alden Peterson

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EXAMINER

YABUT, DIANE D

ART UNIT

PAPER NUMBER

3734

MAIL DATE

DELIVERY MODE

07/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/637,213	Applicant(s) PETERSON ET AL.	
	Examiner DIANE YABUT	Art Unit 3734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 83-87, 89-99 is/are pending in the application.
- 4a) Of the above claim(s) 91-99 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 83-87, 89 and 90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's amendment received on 04/13/2009.

The examiner acknowledges the amendments made to the claims.

Claims 83-87 and 89-99 are pending in this application. Claims 91-99 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 83-87 and 89-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaster** (U.S. Patent No. **5,234,447**) in view of **Yencho** (U.S. Patent No. **6,206,913**).

Claims 83 and 86: Kaster discloses a connector for use in making an artificial, fluid-tight, hollow, annular connection between an end portion of a tubular graft conduit and a side wall of a tubular body conduit in a patient via an artificially created aperture in the side wall of the tubular body conduit so that the tubular graft conduit extends from the tubular body conduit outside of the tubular body conduit and the patient's body fluid can flow between lumens of the tubular graft conduit and the tubular body conduit via the connection, the connector comprising a structure **12** which is annularly continuous and configured for

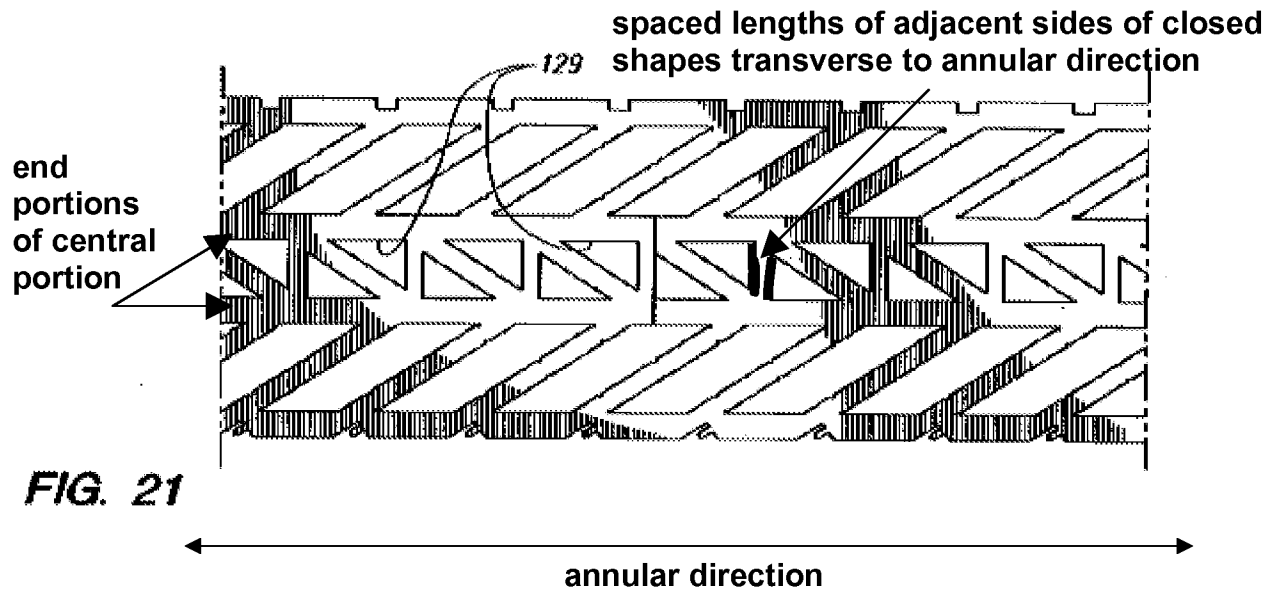
Art Unit: 3734

disposition annularly around the outside of the tubular graft conduit, a plurality of first members **43** and a plurality of second members **44** extending from the structure in an annular array which is substantially concentric with the structure, the first members being configured to pass through the side wall of the tubular graft conduit at respective locations that are spaced from one another around the side wall of the tubular graft conduit, and the first and second members being further configured to reach respective locations on the side wall of the tubular body conduit that are spaced annularly around the aperture when the connector is in use and the first and second members are extending substantially radially out from the structure (Figures 10, 14-19).

Kaster discloses the claimed device except for the structure being a continuous and uninterrupted ring that comprises nitinol, or the first and second members being resiliently biased to extend substantially radially out from the structure and being elastically deflectable substantially parallel to a central longitudinal axis of the structure, as well as the structure comprising a plurality of closed shapes, each of which has an open center, and each of which is compressible and expandable in a direction that is annular of the structure, all of said shapes being connected to one another in a single row that extends annularly around the structure and so that open centers of all of said shapes are disposed in said single row, each said closed shape being connected to a next adjacent closed shape in said row along only a central portion of a length of a side of said shape that is transverse to said direction.

Art Unit: 3734

Yencho teaches an annularly continuous and uninterrupted ring connector **110** for attaching a graft to a blood vessel comprising a plurality of closed shapes (either between **123**, **124**, or openings **129**), each of which has an open center, and each of which is compressible and expandable in a direction that is annular of the structure ("deformable sections"), all of said shapes being connected to one another in a single row that extends annularly around the structure and so that open centers of all of said shapes are disposed in said single row, each said closed shape being connected to a next adjacent closed shape in said row along only a central portion of a length of a side of said shape that is transverse to said direction (Figures 12 and 21; col. 11, lines 25-32). Each of closed shapes **129** is connected to a next adjacent closed shape in said row along only a central portion of a length of a side of said shape that is transverse to said direction, end portions of the length of that side that continue beyond either end of the central portion being spaced from the next adjacent closed shape in the direction that is annular of said structure, so that expansion of any of said shapes in the direction that is annular of said structure causes the entirety of said structure and the entirety of said connector to annularly enlarge. See annotated Figure 21 below.



It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kaster by providing openings in a single row, as taught by Yencho, in order to allow for tissue ingrowth and therefore facilitate sealing and attaching a graft to a blood vessel (col. 11, lines 34-37). Yencho also teaches the use of nitinol in a graft stent, which provides for a resiliently biased and elastically deflectable structure (col. 9, lines 61-65). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kaster by providing nitinol as a material for the connector, as taught by Yencho, since nitinol is well known for its compatibility with the body, and in order for the first and second members to be more flexible and adjustable during deployment.

Claim 84: Kaster discloses the first **43** and second **44** members extending from respective first and second axially spaced portions of the structure, in that the edges of **46** are axially spaced (Figure 10).

Art Unit: 3734

Claim 85: Kaster discloses when the first **43** and second **44** members are being deflected substantially parallel to the central longitudinal axis of the structure, they extend in respective opposite directions away from the structure (Figures 14-19).

Claim 87: Kaster discloses the first **43** and second **44** members being further configured for disposition on respective opposite sides of the side wall of the tubular body conduit when the connector is in use and the first and second members are extending substantially radially out from the structure (Figures 14-19).

Claim 89: Kaster discloses the structure being configured for annular and axial flexibility (Figures 10, 14-19).

Claim 90: Kaster discloses the structure and the first and second members being all one piece (Figure 8).

Response to Arguments

3. Applicant's arguments filed 04/13/2009 and 05/16/2008 (reiterated within the arguments of 04/13/2009) have been fully considered but they are not persuasive.

4. Applicant argues that Kaster does not disclose a row of closed shapes that cause expansion in the annular direction. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

Art Unit: 3734

combinations of references. As maintained above, the central portion of Kaster's ring is modified with Yencho's teaching of closed shapes.

5. Applicant's amendment of an "uninterrupted ring all the way around the outside of the tubular graft conduit" is considered by the examiner, as it does distinguish over the device of Kaster, but not over the device of Yencho, and therefore the argument that Kaster does not disclose this limitation is moot.

6. Applicant also argues that the one or more solid ring connectors of Yencho make it impossible for the "entirety" of the connectors to annularly or radially expand. The examiner disagrees. Yencho's connectors are made with elastic materials that allow radial expansion, and the rings **112**, **113** also have notches **143**, as seen in Figure 12, which may facilitate radial expansion if subjected to a radially expanding force, and therefore it is not "impossible" for the entirety of the connectors taught by Yencho to expand radially.

7. Applicant's arguments with respect to claim 83 regarding the first and second members in Kaster not being resiliently biased or elastically deflectable have been considered but are moot in view of the new ground(s) of rejection. It is noted that even though Yencho's teaching of nitinol appear to be directed only to certain embodiments (Figures 1-11) not cited by the examiner, it still provides a teaching or motivation that would be obvious to one of ordinary skill in the art to implement the material in the device of Kaster. Yencho recognizes using suitable materials for the embodiments of Figures 12-29, and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANE YABUT whose telephone number is (571)272-6831. The examiner can normally be reached on M-F: 9AM-4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on (571) 272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3734

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diane Yabut/
Examiner, Art Unit 3734

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3734